

REMARKS

Favorable reconsideration of this application is requested. Claims 1 and 2 are pending in this application. Editorial revisions have been made in claim 1. The revision in claim 1 concerning the irreversible deformation is supported, for example, at page 4, lines 26-35 and page 6, lines 4-8. The revision concerning the compressed state is supported at page 6, lines 15-20.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

The rejection focuses on the phrase "predetermined amount of irreversible deformation will be caused in the battery container," in claim 1. Applicants do not concede the correctness of the rejection. However, in the interest of advancing prosecution, an alternative description has been provided for this aspect of the claim. The revision resolves any issues of clarity. The Examiner is invited to contact the undersigned if further revisions are needed to address this issue.

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shimakawa et al., U.S. Patent 5,817,435. The rejection is traversed.

Shimakawa discusses adjusting the size and mechanical strength of end plates and binding members in a battery module, taking into account the expansion of the electrode group and the number and internal pressure of the stacked cells. See col. 6, lines 20-24. That is, the issue addressed by Shimakawa is providing end plates and connecting rods that will be sufficient to prevent the integrated cell group from disassembling.

In contrast, the combined battery of the present invention requires the cells to be bound with a force that is set low enough to prevent expansion of the cells above a certain level, particularly, a level that causes irreversible deformation of the battery container. The binding force used in the product of the invention is determined based on the number and compressibility of the cells and stiffness of the battery container. Shimakawa fails to teach or even suggest a combined battery in which the binding force is selected to prevent expansion of the cells beyond a level that causes irreversible deformation, much less a binding force that is determined from various factors including the stiffness of the battery.

Shimakawa is silent as to any actual binding force used for the battery module. Therefore, there is no reasonable basis to assume that the force is below the threshold required by the present claims.

Moreover, claim 1 requires a battery container that is in a compressed state due to the binding force immediately after assembly of the battery. Shimakawa is silent as to this feature as well.

In view of the foregoing amendments and remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims. Please direct any inquiries concerning this application to the undersigned attorney at 612-371-5237.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402 - 0903
(612) 332-5300

Date: September 18, 2003

By



Douglas P. Mueller

Reg. No. 30,300

Customer No. 23552